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## Anti-Evolutionism and the Effects of the Scopes Trial

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In 1925 John T. Scopes was convicted of the crime of teaching evolution in violation of a new Tennessee law. The circus-like trial has been regarded by many observers as a *rite de passage* for twentieth century attitudes—although Scopes was convicted, his trial held anti-evolutionism up to wide public ridicule, and his \$100 fine was in fact overturned on a technicality upon appeal.

The trial did not, however, silence anti-evolutionists, and current creationist politics are only the most recent evidence of this. Far from settling the issue, the trial proved much more equivocal than most scientific observers have assumed. Underlying issues remain hotly contested, despite most scientists' assumptions. Even more than in 1925, biologists appreciate evolutionary theory as the key to understanding their subject matter rather than as an article of faith or debate; even though the specific work of Darwin remains subject to lively discussion and modification, his basic contribution to science is today appreciated as brilliant and sophisticated.

Contemporary anti-evolutionists argue their positions for cultural rather than biological reasons—sometimes as heritors of a rather noble egalitarian cause, sometimes out of a seeming ignorance of modern biology, and sometimes out of a cynical political position which seeks to denigrate intellectualism or to advance a narrow, sectarian political philosophy which would seem to be antithetical to anti-evolutionist rhetoric (cf., Godfrey 1981). In anthropology and biology today, evolutionism is little-related to the systematic justification of the status quo which characterized much of the early use (but not substance) of Darwin's work. Herbert Spencer, one of the founders of "social science," sought to justify every earthly condition as a product of natural law—the rich were rich and the poor were poor because of Darwinian principles, to Spencer. But this was neither Darwin's argument nor is it the position of modern evolutionists. Most anti-evolutionism is based upon much less egalitarian grounds (indeed, it is often couched in authoritarian phrasology and based upon an ideal of unquestioning subservience to authority (cf. Fitzgerald 1981). The anti-Spencerian aspect of anti-evolutionism, however, continues to color the popular perception of the evolution-creation argument, and it is cynically exploited by ideologues who portray evolution as a philosophy justifying pseudo-Nietzschean, value-free "survival of the socially fittest."

It perplexes evolutionists, who have long since abandoned and forgotten Spencer's appeal of a century ago, that many anti-evolutionists equate evolution with Spencerism. Jehovah's Witnesses, for example, rail against a strawman-Darwin legitimizing racism, inequality, communism, and fascism; and "scientific creationists" often echo their argument against Spencerism as if it were Darwinism (Anonymous, 1967; LaHaye in Morris, 1974). To anthropologists, sociologists, and especially biologists, most of Spencerism represents a discredited misuse of the idea of evolution, not an active theoretical perspective. Yet Herbert A. Simon (1980:74) writes in the 1980 centennial edition of *Science* that evolutionary theory has three current applications in the social sciences: "the survival of profit maximizers' argument, evolutionary models of the dynamics of business firm growth, and the current debate about evolutionary selection of traits of 'egoism' and 'altruism,'" and he notes that natural selection is central to the conservative economics theory of Nobel Laureate Milton Friedman. (He adds that "we have not yet

clearly identified the economic analogs of mutation and inheritance..." rather understandably.) (cf. Godfrey and Cole, 1979).

Evolutionists unaware that such ideas are still current among some intellectuals should perhaps be less quick to laugh at fundamentalists for beating dead horses. Yet many creationists seem to have reconciled conservative economics with their anti-evolutionism, and modern "scientific creationism" is firmly allied with the "New Right," despite preachments about egalitarian populist virtues. Extolling the "common man" (women seem to be explicitly secondary, as Fitzgerald, 1981, demonstrates), neo-creationists manipulate a long-standing populist, anti-expert sentiment which does not propose a clear route to popular expertise in the form of public education but rather a belief that people already know all they need to know—that "book-learning" obfuscates "truth," although creationists more than ever claim to be scholars.

### THE EFFECTS OF ANTI-EVOLUTIONISM

Scopes proved to be the only person ever tried for violating the "monkey law" in Tennessee, and laws in other states were similarly unenforced in following decades. The derisive trial publicity cast creationism in a foolish light, and it is easy to conclude that the Tennessee and other states' anti-evolution laws failed long before they were ruled unconstitutional in the late 1960's. Was creation legislation a harmless nod to a vocal constituency, since people violating these laws were not prosecuted? Unfortunately, we cannot measure the extent to which teachers who taught or wanted to teach evolution were fired, harassed, or intimidated by pressure groups using the laws as formal justification, let alone how often state endorsement of creationism influenced people more subtly. However, we do have an excellent barometer of public exposure to evolution in the classroom: textbook content.

Nineteen twenty-five was a watershed year after which textbooks tended to remove or dilute their treatments of evolution; some publishers began the trend in 1924, just as anti-evolution laws began to proliferate in Southern states. Publishers seem to have viewed the trial and its publicity as a warning of the need for self-censorship to avoid loss of sales, not a civil liberties victory for evolution. A number of texts had previously been quite outspoken about the validity of evolution as the most important basis of modern biology, but their new editions quietly downplayed the theme.

Until the 1930's virtually all school textbooks were by high school teachers with little training or experience as practicing biologists. Books in the 1930's were not more "evolutionary" than their predecessors; or if they were, as was Alfred Kinsey's *Introduction to Biology* (Lippincott 1926), they were not adopted widely. Non-controversy, rather than scientific quality, determined book adoption by many school committees, and anti-evolutionists learned to bring effective pressure on them.

A number of states have state-wide book selection which admits or excludes publishers from a large market, sometimes for years. When the state is the size of Texas or California, a significant portion of a publisher's national sales depends upon adoption decisions that may be subject to local political pressure. In the 1970's, socially and

religiously conservative Southern states had roughly half the nation's total high school enrollment in biology classes, despite having only a third or fewer of all American high school students; only about 1 in 6 Northerners studied biology while 1 in 4 did so in the South, perhaps because of the greater importance of agriculture and animal husbandry there (Grabiner and Miller 1974:837). Furthermore, most statewide book committees are in the South, and none are in the East.

It makes economic sense for publishers to acknowledge the power of such a large fraction of their market. In the late 20's and 30's publishers played it safe, bowing to the demands (real or perceived) of a fraction of their total market, both because the fraction was large and because there was no counter-balancing pro-evolution lobby. Evolutionists were fairly quiet after their great "victory," in which they humiliated Bryan while losing to him while the more astute Creationists quietly adhered to the political adage, "Don't get mad—get even."

Few pre-college students learned much about evolution before or after the trial, beyond the fact that biologists accept and believe it; and *that* much information could be found in Creationist textbooks. Evolutionists have often exacerbated the problem. Rather than teach evolution as a problem-solving scientific theory, they have frequently presented evolution to the public as a belief system in terms almost calculated to be confrontational. Biologist Julian Huxley, grandson of Darwin's great popularizer Thomas Huxley, proposed that "evolutionary humanism" was to be mankind's next "religion" (1957), and certain other neo-Darwinians have echoed his sentiments less dramatically. Pollsters ask if people "believe in" evolution or the Bible, suggesting the choice is necessary and that the issue is belief rather than understanding or usefulness. Anti-evolutionists such as today's "Scientific Creationists" seize upon such rhetoric as proof that evolution is in fact an "ism" rather than a science, and a belief system diametrically opposed to belief in God.

Until the 1950's, evolutionists were fairly content to teach their intellectual subject to other intellectuals, who may have been offended by literal book-bannings perhaps, but were nevertheless fairly unconcerned about public school biology being generally non-, if not anti-evolutionist. In 1957 the Russian launching of Sputnik brought a rude awakening to intellectuals and other Americans. The political, economic, and military establishments panicked at the thought that Russia seemed to be ahead of America in the "science race." The result was a large-scale reappraisal of American education, which resulted in a massive federal commitment of money and attention to science education. (Ironically, in 1957 the Soviet Union had not yet officially accepted neo-Mendelian genetics and neo-Darwinism, hewing instead to the Lamarckian precepts of Trofim Lysenko, which were only beginning to be discredited in 1956-57!)

The cold war may have thawed slightly since its peak (Stalin was dead, and McCarthyite hysteria had subsided), but fear of communists proved more persuasive than fear of ignorance or belief in the abstract value of science or education. Out of the Cold War grew a series of programs whose non-intellectual genesis was epitomized by their very titles: National Defense Education Act and National Defense Foreign Languages Act. Ongoing official organizations and agencies such as the National Science Foundation often funded scientific and educational reforms because of the Russian challenge as much as because of purely intellectual concerns.

One of the new efforts was the Biological Sciences Curriculum Study (BSCS), created in 1959 to develop a thoroughly reformed biology curriculum for the nation's schools. Their three textbooks, respectively oriented to cellular, ecological and molecular approaches, appeared in 1963-64 as completely fresh and totally evolutionary introductions to high school biology. BSCS drew on the best professional science available rather than on the consensus-oriented, bland non-evolutionism of most previous textbooks. (For

example, one of the most popular *non*-BSCS texts, by Moon, Mann and Otto, 1957, treated evolution only at the end of the book and used the odd term "racial development" rather than "evolution.") The BSCS books quickly became popular; by 1970 they had been adopted by nearly half of American high schools. Professional educators liked them, but some parents liked neither the books nor professional educators. After emotional debate, two of the three titles once adopted in Texas were not included in the approved list in Texas in 1969, but Weinberg (1978) stresses that this was because of teacher dissatisfaction rather than acquiescence to censorship pressures.

Statistics on school commitments to the teaching of evolution are unavailable and probably unobtainable. Using a textbook that mentions or even stresses evolution does not guarantee classroom coverage or stress of it. Medford, Oregon School Superintendent Richard Langton may have guilelessly stated a common view when he said:

*Evolution is not taught in any of (our) schools...; neither is creation for that matter. Down through the years, educators have learned that this is such a controversial subject that it is far better not to deal with it, even on a fair basis, pointing out the claims of both sides. (Edwards 1980:11)*

In 1980 creation instruction was officially available in states such as Wisconsin, Missouri, and South Dakota (Gorman 1980:94). In school districts in other states a *de facto* "equal time" formula prevails (Weinberg 1980); in 1981 the Arkansas and Louisiana legislatures passed laws *requiring* equal time treatment of the issue. In 1980 Texas dictated that evolution be presented as "only one of several explanations of the origin of mankind" (Gorman 1980:94), and in 1981 a California court ruled that evolution be taught as "theory" rather than "fact." Lois Arnold, senior science editor at Prentice-Hall, said "We don't advocate the idea of scientific creation, but we felt we had to represent other points of view," and another editor whose book presents creationism said "... after all we are in the business of selling textbooks in the 1980's" (*ibid*). The downgrading of evolution in major textbooks in the 1980's is a reaction to political and economic pressures, not to a changing scientific evaluation of evolution.

The clearest example of the political nature of contemporary anti-evolutionism, however, is not the BSCS project but the MACOS project. *Man: A Course of Study*, supported from 1963 by the National Science Foundation, was finally published in 1970 by the Education Development Center as an introduction to evolution and behavioral social science for upper elementary students (Grades 5 and 6, usually). In 1980, Ronald Reagan used MACOS in his successful Presidential campaign as an example of the federal government endorsing questionable and subversive values. He asked why NSF did not instead develop curricula supporting Christian values (*Science* 1980).

MACOS books and filmstrips comprised a rather complex, expensive package for school use, and no doubt many schools did not adopt the program for simple budgetary reasons. No commercial publisher would touch the project because "religious groups would not endorse the teaching of this type of material," according to a spokesman for the small firm which agreed to do it (Nelkin 1977:34). But by 1974, 1700 school districts in 47 states had adopted MACOS. By 1975 this sales rate plummeted 70% when organized opposition asserted itself.

MACOS asked students to study animals such as salmon and a human society such as the Netsilik Eskimos, and then to compare other animals and other human cultures with their own lives. What is human about humans? How did we get this way? Can we be made more so? Animal research, ethnography, and self-study were all part

of the course, and the combination proved explosive. Parents reacted in force:

"I will never say I came from an ape."

"Teaching that man is an animal and nothing more is denying the existence of God and Religion."

"I wonder how many parents would be happy to see their son identify with a baboon instead of his father?"

"(MACOS) will break down the moral fiber of American youth."

"The education experts are dictating our values."

"It eliminates the beliefs, values, and allegiances of children, alienating them from their parents." (Nelkin 1977:108-9)

Right wing organizations and religious crusaders worked together in organized campaigns to reverse course adoption decisions and to prevent new adoptions. Texans Mel and Norma Gabler, long successful forces in anti-evolution and anti-pornography crusades, joined the fray. Mrs. Gabler was influential in organizing parents as far away as Queensland, Australia, to ban MACOS. A study of anti-MACOS tactics there demonstrated that the "anti" campaigners were "absolutist," "didactic," "totalitarian," and "reactionary" while the pro-MACOS advocates were the opposite: "relativistic," "tolerant," "secular" (Smith and Knight 1978). But that was the very point: the two sides in the dispute did not share the same educational ideals. Cultural relativists who supported MACOS and the right of anti-MACOS people to disagree were ineffective lobbyists compared with their absolutist foes.

Denials aside, relativists *did* represent a viewpoint with political implications. Anti-relativism has a serious intellectual basis, while its opposite, "tolerance," may also have political implications to which leftists as well as rightists may object: was Nazi "culture" beyond criticism because exterminating Jews or Gypsies or homosexuals was warranted on the ground that the Nazis were "sincere?" Is child abuse or wife-battering uncritically acceptable because advocates sincerely believe that such practices are normal, or at least defensible in the name of "relativism?" Does the so-called Family Protection Act pending in Congress justifiably exempt spouse or child abusers from censure by laws designed to prohibit such abuses? Are extreme "Purdah" laws in Islam immune from criticism; should American Blacks be discriminated against by majority vote; should Jews or Iranians be persecuted in America (or Arabs or Reformed Jews in Israel)?

An anonymous reviewer rightly criticized an earlier version of this paper for seeming to defend relativism as an absolute, as if it were natural law. If this paper is read as such a defense of relativism either the reader is mistaken or the writer is unclear. Anyone claiming that judgements do not exist, or that they are immoral, misinterprets *my* interpretation of relativism. I believe that people have the moral responsibility to advocate their beliefs and standards, and to work to achieve them. But as an anthropologist, I believe we each have the duty to understand the contexts of different beliefs rather than condemning them out of egocentric, ethnocentric bias. Relativism should not be used as an excuse to suspend thought or analysis, but rather as an example of liberal tolerance which has bounds.

For example, I once had a rather tense classroom debate with Margaret Mead, who said relativism was THE requirement for being an anthropologist. I asked her to respond to a statement condemning Nazi philosophy without attributing my source: her mentor, Franz Boas. She denounced my quotation as a typical absolutist viewpoint, and I chose not to reveal the source of the quote I had asked her to respond to because it seemed obnoxious. Yet Boas, in effect the inventor of relativism, argued for the application of personal values in personal situations and called for and worked for an anti-Nazi position until the day he died; and in context Mead would not have disagreed at all.

Yet the intellectual dilemma is real: How much can we condemn creationists or child abusers or imperialists or whatever, on the basis

of science? I submit that the answer is fairly simple if we view claims in their combination of empirical and ideological trappings without artificially segregating them or giving one precedence over another because one is "ours." The Bauman Amendment in 1975 would have given Congress direct supervision and veto power over every NSF research grant, but the bill died in the Senate. (Unfortunately for the cause, Bauman has left Congress, convicted on morals charges.) Former Representative John Conlan of Arizona led the attack on policies favoring "low priority behavioral research and curriculum projects," rather than practical projects to create jobs in private industry (Nelkin 1977:119). That same year NSF split off its troublesome biological and social science activities into a separate directorate; in 1980 a proposal was discussed to divide biological from social sciences in the NSF, and in 1981 social science budget cuts were accelerated by the new Reagan administration. The year also saw drastic cuts in federal support for social science research; and science *education* was virtually eliminated from federal budget proposals.

Cultural relativism, central to MACOS, is the idea that one culture is not superior to and should not judge others. This may be the single most influential anthropological finding. It is easily related to liberal and libertarian doctrines of personal, racial, and political equality, and even to anti-imperialism; and anthropologists *have* often given it scientific as well as moral credence. The Bible, for example, admonished "judge not, lest ye be judged," leaving absolutism in the hands of God. Like evolution, relativism implies that what some view as absolutes are actually variants in a continuum.

Relativism is much more complex than evolution as a political/cultural issue, and vastly less agreed upon by anthropologists, in theory as well as practice. Yet anyone dealing with people who possess different values—from social scientists to missionaries to salespersons—quickly learns to avoid denouncing potential friends or clients, while feeling free to disagree with them personally.

Absolutes or *a priori* "givens" are not assumed normatively in modern science, even though scientists are certainly products of their own cultures (cf., Kuhn 1970). To relativists, Western society, American politics, capitalism, and Judeo-Christian ideas of morality are not absolute or perfect any more than is New Guinea tribal life. To people committed to absolute standards as defined by the will of God (*or* nature), relativism is a demeaning, subversive doctrine. It removes an individual's group from the pinnacle of culture, just as evolution's demonstration that people are one among many animal species removes humans from the center of the living world, and as the discoveries of Galileo and Copernicus earlier removed the earth from its central position in the universe.

"Humanism," another red-flag term to many conservatives, is closely related to relativism and evolution. Roughly defined, it is a belief that people are in charge of solving their own problems. It relates natural law to human behavior much the way evolution does (cf., *Newsweek* 1981). It is *not* anti-god or anti-religious—or a religion itself.

Even some orthodox or main-line churches worry about humanism detracting from supernaturalism; for example, "salvation by works" versus Divine election is an age-old Christian debate. A 1980 American Roman Catholic Bishops' pastoral letter expresses concern about the humanistic element of Marxism:

*Marxist transcendence... remains within the scope of human attainment. Christian transcendence consists in being assumed into an order totally beyond the reach of human endeavor.*  
(Des Moines Register 1980)

Evolution, either cultural or biological, assumes forces beyond the individual's control. In the view of some, this makes it an unacceptable rival to God. While the Roman Catholic Church does *not* reject

evolution, statements such as the above are helpful to anti-evolutionists.

Conservative critics charge that "secular humanism," evolution and cultural relativism are elements of a sort of conspiracy to subvert students, substituting themselves for belief in patriotism, old-time religion, the natural authority of leaders and parents, and traditional values. By asking students to question authorities, and to discuss rather than simply accept values, MACOS epitomized the anti-evolutionists' fears of the social implications of evolution. MACOS organizers were impolitic not to have foreseen these negative reactions and planned accordingly. Instead, they used sometimes arrogant language and tactics which enraged the opposition:

*It will not do to dream nostalgically of simpler times when children presumably grew up believing in the love of God, the virtue of hard work, the sanctity of the family, and the nobility of the Western historical tradition. . . We must understand. . . what causes. . . these things."* (Dow 1975:81)

MACOS was not a program to advance atheism, socialism, communism, immorality, or family dissolution. It simply asked students to make appropriate judgments about behavior without being explicitly told that their parents' beliefs were the only way humans could or should behave. Such liberalism is a far cry from the leftism that MACOS critics feared. MACOS also struck nerves because it was designed for young children. Parents who oppose evolution might believe their children could stand exposure to it in elective high school biology courses but not in required elementary school classes. As in disputes over sex education, it is difficult for school administrators to argue against parental control over what their children learn, whatever the experts might prove they "need" to learn.

What *do* children need to learn? At the Scopes trial and in the MACOS debate, the experts argued in vain that students should learn what is necessary to be "citizen scientists" able to cope with a world filled with problems potentially solvable by science. But this was the epitome of the humanist position—that people rather than gods or authorities are humanity's best hope. Anti-evolutionists and other conservatives, from the John Birch Society and the Heritage Foundation to the founders of "Christian Academies," fight this idea as state interference with parental rights. "The idea that an individual should collect evidence and decide for himself is anathema [to the fundamentalist New Right]" (Fitzgerald 1981:99). Reading, writing, and arithmetic are noncontroversial, and abstract sciences such as physics and chemistry, despite their potentially harmful applications, are also seen as value-free and therefore safe. But some parents clearly do not trust their children to make their own judgments after learning methods of inquiry, preferring schools to give pat answers rather than reasoning skills; and they especially distrust "impractical" intellectuals who claim to know what is best, especially when their expertise is often approximate at best and claims to be value-free on the very topics that some parents want authoritatively defined. The teaching of methods and theories, which are the heart of science, is scorned because it is potentially subversive: who knows where questioning will lead? John Dewey (1929:ix) wrote enthusiastically:

*If we once start thinking no one can guarantee what will be the outcome, except that many objects, industries and institutions will be surely doomed. Every thinker puts some portion of an apparently stable world in peril, and no one can wholly predict what will emerge in its place.*

But a virtue to Dewey is a threat to others.

#### ANTI-EVOLUTIONISM AN ANTI-INTELLECTUALISM

For about a century, America's dominant culture has prided itself

on living in an age of science and technology. It has become more and more necessary for individuals to accept the virtues of modernism, progress, and change to fit into "proper" society. Science may not be worshipped overtly, but technology generally is (cf., Cole 1980, Etzioni and Nunn 1974), and many of science's assumptions and ideas are taken for granted by anyone who wants to be identified as educated or middle class. Electricity, nuclear power, or breeding hybrid roses may not be understood, but as a political act people may choose to think they *should* understand them to avoid appearing ignorant. Conversely, rejecting major elements of modernism is also a political act. Sincerely or cynically, and often ambivalently, attacking an intellectual or scientific doctrine has been popular from the evangelism of colonial times to Senator William Proxmire's Golden Fleece Awards. Attacking evolution can be an attack on the establishment or an expression of general discontent rather than simply a position taken with respect to a biological theory (cf. Godfrey, ed., 1982).

Populism is often hailed as unalloyed anti-intellectualism—part of a long American tradition traceable as far back as the early 18th century Great Awakening and its call to abandon rationality in favor of revelation. Richard Hofstadter's *Anti-intellectualism in American Life* (1963) chronicles this pervasive theme as he confidently and artificially demarcates a line between intellectuals and philistines. The "intellectual" tradition he defines is based upon people living "for" ideas and analysis rather than simply using ideas, as he claims Edison used ideas in physics and chemistry, for example. The intellectual is one who turns answers into questions, he writes (1963:25-30). But by these standards *some* anti-evolutionists and populists would seem to qualify as intellectuals. Princeton, Brown, Rutgers, and Dartmouth, for example, were founded by Evangelicals in reaction against the intellectual establishment. "Anti-intellectuals" publish books, found universities, relish debates, and spend their energies advocating ideas rather than passively accepting their fate, even though they may argue passionately for fatalism or surrender to God's will. Hofstadter inadvertently documents a powerful intellectual tradition among people whose leaders often seem to advocate the virtues of ignorance.

But most anti-intellectuals were not eloquent. A Georgia legislator 50 years ago (Hofstadter 1963:125), illustrates the worst of this tradition:

*Read the Bible. It teaches you how to act. Read the hymn book. It contains the finest poetry ever written. Read the almanac. It shows you how to figure out what the weather will be. There isn't another book that it is necessary for anyone to read, and therefore I am opposed to all libraries. . . .*

More recently the Reverend Jerry Falwell, leader of the Moral Majority, warned his followers in 1980 not to read books other than the Bible (Fitzgerald 1981:99). He also warns followers not to wear polyester suits to news conferences and advises women not "to wear pants" (Falwell 1980).

Hofstadter's definition of intellectualism is well-documented, widely accepted—and restrictive. Implying that an Edison or Alexander Graham Bell was not really an intellectual perpetuates the caricature of the impractical professor contrasted with the practical person. "Practical" people understandably resent this definition. But few would challenge Hofstadter's basic premise that anti-intellectualism exists and is a basic theme in American history. Whether or not they conform to Hofstadter's definitions specifically, significant numbers of people have actively opposed or at least resented the "intellectual class." Daniel Boone and Davy Crockett are more typical American folk heroes than Andre Malraux or Goethe.

Anti-intellectualism is seen as a virtue among anti-intellectuals, seemingly to the surprise of the intelligensia. Some anti-intellectualism has been expressly humane and nurturative of values with practical survival value. Even if for unscientific reasons, populists were correct in rejecting Social Darwinist dogma, many intellectuals today would agree. To the extent that modern Creationism gives comfort to people, perhaps scientists would do well not to condemn it; but when creationism interferes with the education of non-believers through censorship, curriculum changes, or other political acts, the situation is different. Advocating anti-scientific beliefs in an age of science, or advocating a simply authority-based version of science, creationists contribute to the kind of ineffective education which led to the Sputnik shock. Intellectuals need to recognize that they represent a political position, and then fight for it, rather than pretend intellectualism is apolitical and value-free. Wanting everyone to be minimally competent in the world of ideas should be more confidently explained and demonstrated to be *valuable*, not just abstractly or condescendingly democratic—"good for the masses."

Anti-evolutionism is best understood as an aspect of the anti-intellectual tradition, but it has varied through time, as has intellectualism. Seen in retrospect, or judged in terms of social usefulness and humane intentions or results, neither side has a monopoly on virtue; but to people who believe science can and should have positive value to society, the occasional virtues of anti-evolutionists are accidents in the midst of a tradition glorifying non-critical acceptance of authority. The errors of scientists have been within a system devoted to self-analysis, testing, and self-correction, rather than to acceptance of the heavy hand of tradition (Godfrey, 1980). It cannot fairly be assumed that today's anti-evolutionists oppose all science—they do not; but they of necessity foster a schizophrenic approach to the world in accepting some science while rejecting its basic principles in other fields. It is ironic that the early 20th century populists were more intellectually consistent than this—an irony compounded by the smug, non-analytical reaction by intellectuals to the Scopes trial which symbolically ended the populist era, preparing the ground for a new fundamentalism of technocrats and suburbanites doing similar things more efficiently, but stripped of many populist virtues.

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